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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,356	04/19/2001	Karl Jacob Haltiner JR.	DP-304959 (DEP-0197)	2480
22851	7590	03/08/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC. M/C 480-410-202 PO BOX 5052 TROY, MI 48007			WILLS, MONIQUE M	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,356

Applicant(s)

HALTINER ET AL.

Examiner

Monique M Wills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 1-25 and 39-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-12-9 and 6-28-9
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 1-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of controlling temperature at an auxiliary power unit located in a vehicle, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on December 20, 2004.

Claims 39-42 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected thermal management system, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on December 20, 2004.

Information Disclosure Statement

The information disclosure statements filed January 12, 2004 and June 28, 2004 has/have been received and complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609.

Specification

The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 26,29 ,31 & 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Armstrong et al. U.S. Patent 6,682,841.

The applied reference has a common assignment with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

With respect to claim 26, Armstrong teaches a method of producing electricity in an auxiliary power unit of a vehicle comprising: adding a fuel (40) and a reactant (32) to a fuel reformer (22); producing a reformat (42) at said fuel reformer (22); introducing said reformat (42) to a fuel cell stack (24); producing electrical power at said fuel cell stack (24); sensing a reformer zone temperature at a reformer zone (18); determining whether said reformer zone temperature is at a first selected temperature range; and adding a first process (32) air flow to said reformer zone (18) if said reformer zone temperature rises above

said first selected temperature range. See Figure 1, and column 2, lines 1-5. As to claim 29, the first process airflow is controlled via a first air control valve. See column 3, lines 10-15.

As to claim 31, the method further comprises: sensing a hot zone temperature at the hot zone (26); determining whether said hot zone temperature is at a second selected temperature range; and adding a second process air flow to the hot zone if the hot zone temperature rises above the second selected temperature range (col. 2, lines 55-65).

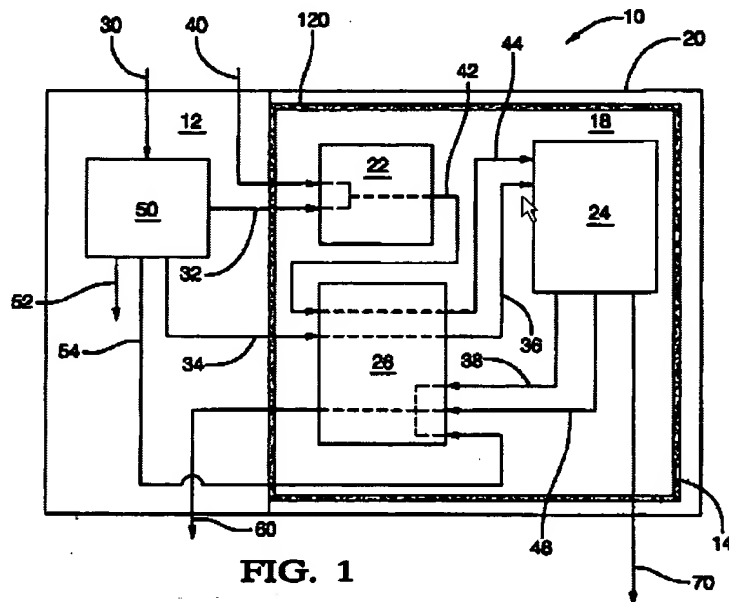


FIG. 1

As to claim 34, the method further comprises controlling the second process airflow via a second air control valve (col. 3, lines 10-15). With respect to claim 35, the method further comprises moving reformer air (42) to the hot zone (26). As to claim 36, the method further comprises moving hot air to a waste energy recovery unit (26).

Therefore, the instant claims are anticipated by Armstrong.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27, 28, 30, 32-33 & 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong et al. U.S. Patent 6,682,841.

Armstrong teaches a thermal management system for a fuel cell as described in the § 102(e) rejection hereinabove.

Armstrong is silent to: reducing the first process air flow to the reformer zone when the temperature falls below a predetermined temperature (claim 27); increasing the first process air flow to the reformer when the reformer zone temperature is above a predetermined temperature range (claim 28); a first temperature range of about 300 to 500 degrees (claim 30); reducing air flow to the hot zone when the hot zone temperature falls below a second selected temperature range (claim 32); increasing the second process air flow to the hot zone if the hot zone temperature increases above the second selected temperature range (claim 33); a second selected temperature range of 600 to 800 degrees (claim 37) and a second selected temperature range of 725 to 775 degrees (claim 38).

However, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to adjust the air flow rate to maintain a predetermined temperature set point. The skilled artisan recognizes that if the temperature is above the set point, increasing the amount of cool air will reduce the temperature back to the set point.

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As to the set point temperature ranges of claims 30 & 37-38, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ the instant temperature set points, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art,. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). The skilled artisan recognizes that the temperature directly effects the reformat yield from the reformer zone.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Michael Barr, may be reached at 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have

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questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

3/04/05

MICHAEL BARR
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Michael Barr', with a long, sweeping horizontal line underneath.